

# 7

Sheet 1 of 14

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>ms</i>	<b>AA</b>	Abagyan et al., "ICM - A Method for Protein Modeling and Design: Applications to Docking and Structure Prediction from the Distorted Native Conformation", <i>J. Comp. Chem.</i> , <b>1994</b> , 15(5), 488-506
	<b>AB</b>	Addess et al., "Structure and Dynamics of the Iron Responsive Element RNA: Implications for Binding of the RNA by Iron Regulatory Binding Proteins", <i>J. Mol. Biol.</i> , <b>1997</b> , 274, 72-83
	<b>AC</b>	Amster, "Fourier Transform Mass Spectrometry", <i>J. Mass Spectrom.</i> , <b>1996</b> , 31, 1325-1337
	<b>AD</b>	An et al., "New Piperazinyl Polyazacyclophane Scaffolds, Libraries and Biological Activities," <i>Bioorg. Med. Chem. Lett.</i> , <b>1998</b> , 8, 2345-2350
	<b>AE</b>	Anderegg et al., "Mass Spectrometric Characterization of a Protein - Ligand Interaction", <i>J. Am. Chem. Soc.</i> , <b>1995</b> , 117, 1374-1377
	<b>AF</b>	Atherton et al., in <i>Solid Peptide Synthesis: A Practical Approach</i> , IRL Press, Oxford, UK, <b>1989</b> , 135
	<b>AG</b>	Baca et al., "Direct Observation of a Ternary Complex between the Dimeric Enzyme HIV-1 Protease and a Substrate-Based Inhibitor", <i>J. Am. Chem. Soc.</i> , <b>1992</b> , 114, 3992-3993
	<b>AH</b>	Baczynskyj et al., "Application of Thermally Assisted Electrospray Ionization Mass Spectrometry for Detection of Noncovalent Complexes of Bovine Serum Albumin with Growth Hormone Releasing Factor and Other Biologically Active Peptides", <i>Rapid Commun. Mass Spectrom.</i> , <b>1994</b> , 8, 280-286
	<b>AI</b>	Bayer et al., "Analysis of Double-Stranded Oligonucleotides by Electrospray Mass Spectrometry", <i>Anal. Chem.</i> , <b>1994</b> , 66, 3858-3863
	<b>AJ</b>	Benson et al., "GenBank", <i>Nucl. Acids Res.</i> , <b>1998</b> , 26(1), 1-7
	<b>AK</b>	Berson et al., "General Principles of Radioimmunoassay", <i>Clin. Chim. Acta</i> , <b>1968</b> , 22, 51-66
	<b>AL</b>	Biemann, K., "Mass Spectrometry of Peptides and Proteins," <i>Ann. Rev. Biochem.</i> , <b>1992</b> , 61, 977-1010
<i>ms</i>	<b>AM</b>	Bowers, M.T. et al., "Mass Spectrometry: Recent Advances and Future Directions," <i>J. Phys. Chem.</i> , <b>1996</b> , 100, 12897-12910

**EXAMINER****DATE CONSIDERED**

10/22/01

**Form PTO-1449 Modified**

Docket No.

**IBIS-0171**

Serial No.

**09/310,844**

List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)

Applicant

**David J. Ecker et al.**

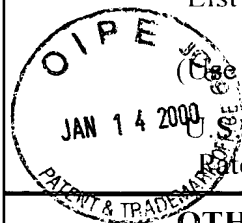
Filing Date

**May 12, 1999**

Group




**1643**

U.S. Department of Commerce  
Patent and Trademark Office

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>WJ</i>	<b>AN</b>	Brown, J.W., "Phylogenetic analysis of RNA structure on the Macintosh computer", <i>CABIOS Commun.</i> , <b>1991</b> , 7(3), 391-393
	<b>AO</b>	Bruce et al., "Bio-Affinity Characterization Mass Spectrometry", <i>Rapid Commun. Mass Spectrom.</i> , <b>1995</b> , 9, 644-650
	<b>AP</b>	Bruins et al., "Ion Spray Interface for Combined Liquid Chromatography/Atmospheric Pressure Ionization Mass Spectrometry", <i>Anal. Chem.</i> , <b>1987</b> , 59, 2642-2646
	<b>AQ</b>	Bryan, "Mechanisms of Action of Aminoglycoside Antibiotics", in <i>New Dimensions in Antimicrobial Therapy</i> , Root, R.K. et al. (eds.), Churchill Livingstone, New York, <b>1984</b> , Vol. 1, Ch. 2, 17-36
	<b>AR</b>	Burlingame, A.L. et al., "Mass Spectrometry," <i>Anal. Chem.</i> , <b>1998</b> , 70, 647R-716R
	<b>AS</b>	Busman et al., "Observation of Large Multimers in the Electrospray Ionization Mass Spectrometry of Peptides", <i>Rapid Commun. Mass Spectrom.</i> , <b>1994</b> , 8, 211-216
	<b>AT</b>	Cai et al., "Capillary electrophoresis - mass spectrometry", <i>J. Chromatogr.</i> , <b>1995</b> , 703, 667-692
	<b>AU</b>	Cain et al., "Solution structure of a DNA hairpin and its disulfide cross-linked analog", <i>Nucl. Acids Res.</i> , <b>1995</b> , 23(12), 2153-2160
	<b>AV</b>	Casey et al., "Iron-Responsive Elements: Regulatory RNA Sequences that Control mRNA Levels and Translation," <i>Science</i> , <b>1988</b> , 240, 924-928
	<b>AW</b>	Cedergren et al., "Modeling the Tertiary Structure of RNA" in <i>RNA Structure and Function</i> , Cold Spring Harbor Laboratory Press, <b>1988</b> , 37-75
	<b>AX</b>	Chattopadhyaya et al., "X-ray structure of a DNA hairpin molecule", <i>Nature</i> , <b>1988</b> , 334, 175-179
	<b>AY</b>	Chen et al., "Structure-Based Discovery of Ligands Targeted to the RNA Double Helix", <i>Biochem.</i> , <b>1997</b> , 36, 11402-11407
	<b>AZ</b>	Chen et al., "Spectroscopic recognition of guanine dimeric hairpin quadruplexes by a carbocyanine dye", <i>Proc. Natl. Acad. Sci.</i> , <b>1996</b> , 93, 2635-2639
<i>✓</i>	<b>BA</b>	Cheng et al., "Using Electrospray Ionization FTICR Mass Spectrometry to Study Competitive Binding of Inhibitors to Carbonic Anhydrase", <i>J. Am. Chem. Soc.</i> , <b>1995</b> , 117, 8859-8860

**EXAMINER***WJ***DATE CONSIDERED***10/22/01*

Form PTO-1449 Modified		Docket No. <b>IBIS-0171</b>	Serial No. <b>09/310,844</b>
List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Applicant <b>David J. Ecker et al.</b>	
		Filing Date <b>May 12, 1999</b>	Group <b>1643</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	<b>BB</b>	Cheng et al., "Direct measurement of oligonucleotide binding stoichiometry of gene V protein by mass spectrometry", <i>Proc. Natl. Acad. Sci USA</i> , <b>1996</b> , 93, 7022-7027	
	<b>BC</b>	Cheng et al., "Electrospray Ionization with High Performance Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for the Study of Noncovalent Biomolecular Complexes", in <i>Techniques in Protein Chemistry</i> , <b>1996</b> , Vol. 7, 13-22	
	<b>BD</b>	Cheong et al., "Solution structure of an unusually stable RNA hairpin, 5'GGAC(UUCG)GUCC", <i>Nature</i> , <b>1990</b> , 346, 680-682	
	<b>BE</b>	Cohen et al., "Probing the solution structure of the DNA-binding protein Max by a combination of proteolysis and mass spectrometry", <i>Protein Sci.</i> , <b>1995</b> , 4, 1088-1099	
	<b>BF</b>	Chu et al., "Affinity Capillary Electrophoresis", <i>Acc. Chem. Res.</i> , <b>1995</b> , 28, 461-468	
	<b>BG</b>	Chu et al., "Using Affinity Capillary Electrophoresis to Identify the Peptide in a Peptide Library that Binds Most Tightly to Vancomycin", <i>J. Org. Chem.</i> , <b>1993</b> , 58, 648-652	
	<b>BH</b>	Chu et al., "Affinity Capillary Electrophoresis - Mass Spectrometry for Screening Combinatorial Libraries", <i>J. Am. Chem. Soc.</i> , <b>1996</b> , 118, 7827-7835	
	<b>BI</b>	Crain et al., "Applications of mass spectrometry to the characterization of oligonucleotides and nucleic acids", <i>Curr. Opin. Biotechnol.</i> , <b>1998</b> , 9, 25-34	
	<b>BJ</b>	De Stasio et al., "Mutations in 16S ribosomal RNA disrupt antibiotic- RNA interactions", <i>EMBO J.</i> , <b>1989</b> , 8, 1213-1216	
	<b>BK</b>	Doktycz et al., "Accumulation and Storage of Ionized Duplex DNA Molecules in a Quadrupole Ion Trap", <i>Anal. Chem.</i> , <b>1994</b> , 66, 3416-3422	
	<b>BL</b>	Dunayevskiy et al., "Mass Spectrometric Identification of Ligands Selected from Combinatorial Libraries Using Gel Filtration", <i>Rapid Commun. Mass Spectrom.</i> , <b>1997</b> , 11, 1178-1184	
	<b>BM</b>	Duret et al., "HOVERGEN: a database of homologous vertebrate genes," <i>Nucl. Acids Res.</i> , <b>1994</b> , 22(12), 2360-2365	
	<b>BN</b>	Ecker et al., "Combinatorial Drug Discovery: Which Methods Will Produce the Greatest Value", <i>Biotech.</i> , <b>1995</b> , 13, 351-360	
	<b>BO</b>	Erie et al., "A Monte Carlo Method for Generating Structures of Short Single-Stranded DNA Sequences", <i>Biopolymers</i> , <b>1993</b> , 33, 75-105	
<b>EXAMINER</b> 		<b>DATE CONSIDERED</b> 10/22/01	

**Form PTO-1449 Modified**

Docket No.

**IBIS-0171**

Serial No.

**09/310,844**

List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)

Applicant

**David J. Ecker et al.**

Filing Date

**May 12, 1999**

Group

**1643**

JAN 14 2000 U.S. Department of Commerce  
Patent and Trademark Office

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>ME</i>	<b>BP</b>	Erickson et al., "Macromolecular X-Ray Crystallography and NMR as Tools for Structure-based Drug Design", <i>Ann. Rep. Med. Chem.</i> , <b>1992</b> , Vol. 27, Ch. 29, 271-289
	<b>BQ</b>	Feng et al., "Analysis of Antibodies and Other Large Glycoproteins in the Mass Range of 150 000 - 200 000 Da by Electrospray Ionization Mass Spectrometry", <i>Anal. Chem.</i> , <b>1992</b> , 64, 2090-2095
	<b>BR</b>	Feng et al., "HIV-1 <i>tat</i> trans-activation requires the loop sequence within <i>tar</i> ", <i>Nature</i> , <b>1988</b> , 334, 165-167
	<b>BS</b>	Filikov et al., "Structure-based design of ligands for protein basic domains: Application to the HIV-1 Tat protein", <i>J. Comp.-Aided Molec. Design</i> , <b>1998</b> , 12, 229-240
	<b>BT</b>	Fitzgerald, M. et al., "Probing the oligomeric structure of an enzyme by electrospray ionization time-of-flight mass spectrometry", <i>Proc. Natl. Acad. Sci. USA</i> , <b>1996</b> , 93, 6851-6856
	<b>BU</b>	Fourmy et al., "Paromomycin Binding Induces a Local Conformational Change in the A-site of 16 S rRNA", <i>J. Mol. Biol.</i> , <b>1998</b> , 277, 333-345
	<b>BV</b>	Fourmy et al., "Structure of the A Site of <i>Escherichia coli</i> 16S Ribosomal RNA Complexed with an Aminoglycoside Antibiotic", <i>Science</i> , <b>1996</b> , 274, 1367-1371
	<b>BW</b>	Gale et al., "Characterization of Noncovalent Complexes Formed between Minor Groove Binding Molecules and Duplex DNA by Electrospray Ionization - Mass Spectrometry", <i>J. Am. Soc. Mass Spectrometry</i> , <b>1995</b> , 6, 1154-1164
	<b>BX</b>	Gale et al., "Observation of Duplex DNA-Drug Noncovalent Complexes by Electrospray Ionization Mass Spectrometry", <i>J. Am. Chem. Soc.</i> , <b>1994</b> , 116, 6027-6028
	<b>BY</b>	Ganem et al., "Detecting Noncovalent Complexes of Biological Macromolecules: New Applications of Ion-Spray Mass Spectrometry", <i>ChemTracts-Org. Chem.</i> , <b>1993</b> , 6, 1-22
	<b>BZ</b>	Ganem et al., "Detection of Oligonucleotide Duplex Forms by Ion-Spray Mass Spectrometry", <i>Tetra. Lett.</i> , <b>1993</b> , 34(9), 1445-1448
	<b>CA</b>	Ganguly et al., "Studies of the <i>Ras</i> -GDP and <i>Ras</i> -GTP Noncovalent Complexes by Electrospray Mass Spectrometry", <i>Tetrahedron</i> , <b>1993</b> , 49(36), 7985-7996

**EXAMINER***my***DATE CONSIDERED**

10/22/01

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	<b>CB</b>	Gao et al., "Screening Derivatized Peptide Libraries for Tight Binding Inhibitors to Carbonic Anhydrase II by Electrospray Ionization-Mass Spectrometry", <i>J. Med. Chem.</i> , <b>1996</b> , 39, 1949-1955
	<b>CC</b>	Gautheret et al., "Inferring the conformation of RNA base pairs and triples from patterns of sequence variation", <i>Nucl. Acids Res.</i> , <b>1997</b> , 25(8), 1559-1564
	<b>CD</b>	Gautheret et al., "G · U base pairing motifs in ribosomal RNA", <i>RNA</i> , <b>1995</b> , 1, 807-814
	<b>CE</b>	Gautheret et al., "Identification of Base-triples in RNA using Comparative Sequence Analysis", <i>J. Mol. Biol.</i> , <b>1995</b> , 248, 27-43
	<b>CF</b>	Gdaniec et al., "Iron Regulatory Element and Internal Loop/Bulge Structure for Ferritin mRNA Studied by Cobalt(III) Hexamine Binding, Molecular Modeling, and NMR Spectroscopy", <i>Biochem.</i> , <b>1998</b> , 37, 1505-1512
	<b>CG</b>	Glover et al., "Sequencing of Oligonucleotides Using High Performance Liquid Chromatography and Electrospray Mass Spectrometry", <i>Rapid Commun. Mass Spectrom.</i> , <b>1995</b> , 9, 897-901
	<b>CH</b>	Goodlett et al., "Direct Observation of a DNA Quadruplex by Electrospray Ionization Mass Spectrometry", <i>Biol. Mass Spectrom.</i> , <b>1993</b> , 22, 181-183
	<b>CI</b>	Greig et al., "Measurement of Macromolecular Binding Using Electrospray Mass Spectrometry. Determination of Dissociation Constants for Oligonucleotide - Serum Albumin Complexes", <i>J. Am. Chem. Soc.</i> , <b>1995</b> , 117, 10765-10766
	<b>CJ</b>	Grens et al., "The 5'- and 3'-Untranslated Regions of Ornithine Decarboxylase mRNA Affect the Translational Efficiency," <i>J. Biol. Chem.</i> , <b>1990</b> , 265(20), 11810-11816
	<b>CK</b>	Griffey et al., "Detection of base pair mismatches in duplex DNA and RNA oligonucleotides using electrospray mass spectrometry", <i>Proc. SPIE-Int. Soc. Opt. Eng.</i> , <b>1997</b> , 2985, 82-86
	<b>CL</b>	Gschwend et al., "Orientational sampling and rigid-body minimization in molecular docking revisited: On-the-fly optimization and degeneracy removal", <i>J. Comput.-Aided Mol. Des.</i> , <b>1996</b> , 10, 123-132
	<b>CM</b>	Gutell, "Collection of small subunit (16S- and 16S-like) ribosomal RNA structures: 1994", <i>Nucl. Acids Res.</i> , <b>1994</b> , 22(17), 3502-3507

**EXAMINER** **DATE CONSIDERED** 10/22/01

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**Filing Date  
**May 12, 1999**Group  
**1643**U.S. Department of Commerce  
Patent and Trademark Office**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>my</i>	<b>CN</b>	Gutell, "Collection of small subunit (16S- and 16S-like) ribosomal RNA structures", <i>Nucl. Acids Res.</i> , <b>1993</b> , 21(13), 3051-3054
	<b>CO</b>	Gutell, "A compilation of large subunit (23S and 23S-like) ribosomal RNA structures: 1993", <i>Nucl. Acids Res.</i> , <b>1993</b> , 21(13), 3055-3074
	<b>CP</b>	Henion et al., "Mass Spectrometric Investigations of Drug-Receptor Interactions", <i>Ther. Drug Monitoring</i> , <b>1993</b> , 15(6), 563-569
	<b>CQ</b>	Hillenkamp et al., "Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Biopolymers", <i>Anal. Chem.</i> , <b>1991</b> , 63(24), 1193A-1202A
	<b>CR</b>	Hu et al., "Determining Calcium-binding Stoichiometry and Cooperativity of Parvalbumin and Calmodulin by Mass Spectrometry", <i>J. Mass Spectrom.</i> , <b>1995</b> , 30, 1076-1082
	<b>CS</b>	Huang et al., "Packed-Capillary Liquid Chromatography/Ion-Spray Tandem Mass Spectrometry Determination of Biomolecules", <i>Anal. Chem.</i> , <b>1991</b> , 63, 732-739
	<b>CT</b>	Huang et al., "LC/MS and LC/MS/MS Determination of Protein Tryptic Digests", <i>J. Am. Soc. Mass Spectrom.</i> , <b>1990</b> , 1(2), 158-165
	<b>CU</b>	Jefson, "Applications of NMR Spectroscopy to Protein Structure Determination", <i>Ann. Rep. Med. Chem.</i> , <b>1988</b> , Vol. 23, Ch. 28, 275-283
	<b>CV</b>	Jensen et al., "Mass Spectrometric Characterization of UV-Crosslinked Protein-Nucleic Acid Complexes", <i>42nd ASMS Conf. On Mass Spectrom. and Allied Topics</i> , <b>1994</b> , 923
	<b>CW</b>	Jensen et al., "Direct Observation of UV-crosslinked Protein-Nucleic Acid Complexes by Matrix-assisted Laser Desorption Ionization Mass Spectrometry", <i>Rapid Commun. Mass Spectrom.</i> , <b>1993</b> , 7, 496-501
	<b>CX</b>	Jones, "A Graphics Model Building and Refinement System for Macromolecules", <i>J. Appl. Crystallogr.</i> , <b>1978</b> , 11, 268-272
	<b>CY</b>	Jonsson et al., "Real-Time Biospecific Interaction Analysis Using Surface Plasmon Resonance and a Sensor Chip Technology", <i>Biotech.</i> , <b>1991</b> , 11(5), 620-627
	<b>CZ</b>	Jorgensen et al., "Direct Determination of Solution Binding Constants for Noncovalent Complexes between Bacterial Cell Wall Peptide Analogues and Vancomycin Group Antibiotics by Electrospray Ionization Mass Spectrometry", <i>Anal. Chem.</i> , <b>1998</b> , 70, 4427-4432

**EXAMINER****DATE CONSIDERED**

10/22/01

**Form PTO-1449 Modified**

Docket No.

**IBIS-0171**

Serial No.

**09/310,844**

List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)

Applicant

**David J. Ecker et al.**

Filing Date

**May 12, 1999**

Group

**1643**

U.S. Department of Commerce  
Patent and Trademark Office

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>my</i>	<b>DA</b>	Karlsson et al., "Kinetic analysis of monoclonal antibody-antigen interactions with a new biosensor based analytical system", <i>J. Immunol. Methods</i> , <b>1991</b> , 145, 229-240
	<b>DB</b>	Kassel et al., "Direct Coupling of an Automated 2-Dimensional Microcolumn Affinity Chromatography-Capillary HPLC System with Mass Spectrometry for Biomolecular Analysis", in <i>Techniques in Protein Chemistry</i> , J. Crabb (ed.), Academic Press, San Diego, <b>1995</b> , Ch. VI, 39-46
	<b>DC</b>	Knight et al., "Electrospray Ionization Mass Spectrometry as a Mechanistic Tool: Mass of Human Leucocyte Elastase and a $\beta$ -Lactam-Derived E-I Complex", <i>Biochem.</i> , <b>1993</b> , 32, 2031-2035
	<b>DD</b>	Köster, H. et al., "A Strategy for rapid and efficient DNA sequencing by mass spectrometry", <i>Nature Biotechnology</i> , <b>1996</b> , 14, 1123-1128
	<b>DE</b>	Kozak, "Structural Features in Eukaryotic mRNAs That Modulate the Initiation of Translation", <i>J. Biol. Chem.</i> , <b>1991</b> , 266(30), 19867-19870
	<b>DF</b>	Kuntz et al., "Structure-Based Molecular Design", <i>Acc. Chem. Res.</i> , <b>1994</b> , 27(5), 117-123
	<b>DG</b>	Kuntz et al., "A Geometric Approach to Macromolecule-Ligand Interactions", <i>J. Mol. Biol.</i> , <b>1982</b> , 161, 269-288
	<b>DH</b>	Laferriere et al., "An RNA pattern matching program with enhanced performance and portability", <i>Comput. Appl. Biosci.</i> , <b>1994</b> , 10(2), 211-212
	<b>DI</b>	Lane et al., "SPARC Is a Source of Copper-binding Peptides that Stimulate Angiogenesis", <i>J. Cell Biol.</i> , <b>1994</b> , 125(4), 929-943
	<b>DJ</b>	Li et al., "Mass Spectrometric Studies on Noncovalent Dimers of Leucine Zipper Peptides", <i>J. Am. Chem. Soc.</i> , <b>1993</b> , 115, 8409-8413
	<b>DK</b>	Light-Wahl et al., "Observation of a Small Oligonucleotide Duplex by Electrospray Ionization Mass Spectrometry", <i>J. Am. Chem. Soc.</i> , <b>1993</b> , 115, 803-804
	<b>DL</b>	Light-Wahl et al., "Observation of the Noncovalent Quaternary Associations of Proteins by Electrospray Ionization Mass Spectrometry", <i>J. Am. Chem. Soc.</i> , <b>1994</b> , 116, 5271-5278
	<b>DM</b>	Light-Wahl et al., "Collisionally Activated Dissociation and Tandem Mass Spectrometry of Intact Hemoglobin $\beta$ -Chain Variant Proteins with Electrospray Ionization", <i>Biol. Mass Spectrom.</i> , <b>1993</b> , 22, 112-120

**EXAMINER****DATE CONSIDERED***10/22/01*

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>my</i>	<b>DN</b>	Lim et al., "Recognition of Cell-wall Peptide Ligands by Vancomycin Group Antibiotics: Studies Using Ion Spray Mass Spectrometry", <i>J. Mass Spectrom.</i> , <b>1995</b> , 30, 708-714
	<b>DO</b>	Little et al., "Rapid Sequencing of Oligonucleotides by High-Resolution Mass Spectrometry", <i>J. Am. Chem. Soc.</i> , <b>1994</b> , 116, 4893-4897
	<b>DP</b>	Little et al., "Sequencing 50-mer DNAs Using Electrospray Tandem Mass Spectrometry and Complementary Fragmentation Methods", <i>J. Am. Chem. Soc.</i> , <b>1995</b> , 117, 6783-6784
	<b>DQ</b>	Little et al., "Infrared Multiphoton Dissociation of Large Multiply Charged Ions for Biomolecule Sequencing", <i>Anal. Chem.</i> , <b>1994</b> , 66, 2809-2815
	<b>DR</b>	Little et al., "Verification of 50- to 100-mer DNA and RNA sequences with high-resolution mass spectrometry", <i>Proc. Natl. Acad. Sci. USA</i> , <b>1995</b> , 92, 2318-2322
	<b>DS</b>	Lodmell et al., "Genetic and comparative analyses reveal an alternative secondary structure in the region of nt 912 <i>Escherichia coli</i> 16S rRNA", <i>Proc. Natl. Acad. Sci. USA</i> , <b>1995</b> , 92, 10555-10559
	<b>DT</b>	Loo, "Studying Noncovalent Protein Complexes by Electrospray Ionization Mass Spectrometry", <i>Mass Spectrometry Reviews</i> , <b>1997</b> , 16, 1-23
	<b>DU</b>	Loo, "Bioanalytical Mass Spectrometry: Many Flavors to Choose", <i>Bioconjugate Chem.</i> , <b>1995</b> , 6, 644-665
	<b>DV</b>	Loo, "Observation of Large Subunit Protein Complexes by Electrospray Ionization Mass Spectrometry", <i>J. Mass Spectrom.</i> , <b>1995</b> , 30, 180-183
	<b>DW</b>	Loo et al., "Use of Electrospray Ionization Mass Spectrometry to Probe Antisense Peptide Interactions", <i>Biol. Mass Spectrom.</i> , <b>1994</b> , 23, 6-12
	<b>DX</b>	Loo et al., "Interaction of Angiotensin Peptides and Zinc Metal Ions Probed by Electrospray Ionization Mass Spectrometry", <i>J. Am. Soc. Mass Spectrom.</i> , <b>1994</b> , 5(11), 959-965
	<b>DY</b>	Major et al., "Reproducing the three-dimensional structure of a tRNA molecule from structural constraints", <i>Proc. Natl. Acad. Sci.</i> , <b>1993</b> , 90, 9408-9412
	<b>DZ</b>	Marshall et al., "Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: The Teenage Years", <i>Anal. Chem.</i> , <b>1991</b> , 63(4), A215-A229

EXAMINER *my*DATE CONSIDERED *10/22/01*



**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

ms	<b>EA</b>	Marshall et al., "Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: A Primer", <i>Mass Spectrom. Rev.</i> , <b>1998</b> , 17, 1-35
	<b>EB</b>	Martin, F. et al., "The gene for histone RNA hairpin binding protein is located on human chromosome 4 and encodes a novel type of RNA binding protein," <i>EMBO J.</i> , <b>1997</b> , 16(4), 769-778
	<b>EC</b>	McLuckey et al., "Tandem Mass Spectrometry of Small, Multiply Charged Oligonucleotides", <i>J. Am. Soc. Mass Spectrom.</i> , <b>1992</b> , 3(1), 60-70
	<b>ED</b>	McLuckey et al., "Decompositions of Multiply Charged Oligonucleotide Anions", <i>J. Am. Chem. Soc.</i> , <b>1993</b> , 115, 12085-12095
	<b>EE</b>	McMartin et al., "QXP: Powerful, rapid computer algorithms for structure-based drug design," <i>J. Comput.-Aided Mol. Design</i> , <b>1997</b> , 11, 333-344
	<b>EF</b>	Meng et al., "Automated Docking with Grid-Based Energy Evaluation", <i>J. Comp. Chem.</i> , <b>1992</b> , 13(4), 505-524
	<b>EG</b>	Miyaguchi et al., "An antibiotic motif of an RNA fragment derived from the A-site-related region of <i>Escherichia coli</i> 16A rRNA", <i>Nucl. Acids Res.</i> , <b>1996</b> , 24(19), 3700-3706
	<b>EH</b>	Moras et al., "Crystal structure of yeast tRNA", <i>Nature</i> , <b>1980</b> , 288, 669-674
	<b>EI</b>	Mueller et al., "A New Model for the Three-dimensional Folding of <i>Escherichia coli</i> 16S Ribosomal RNA. I. Fitting the RNA to a 3D Electron Microscopic Map at 20 Å", <i>J. Mol. Biol.</i> , <b>1997</b> , 271, 524-544
	<b>EJ</b>	Nelson et al., "Mass Determination of Human Immunoglobulin IgM Using Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry", <i>Rapid Commun. Mass Spectrom.</i> , <b>1994</b> , 8, 627-631
	<b>EK</b>	Ni et al., "Interpretation of Oligonucleotide Mass Spectra for Determination of Sequence Using Electrospray Ionization and Tandem Mass Spectrometry", <i>Anal. Chem.</i> , <b>1996</b> , 68, 1989-1999
	<b>EL</b>	Nordhoff et al., "Direct Mass Spectrometric Sequencing of Low-picomole Amounts of Oligodeoxynucleotides with up to 21 Bases by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry", <i>J. Mass Spectrom.</i> , <b>1995</b> , 30, 99-112

**EXAMINER****DATE CONSIDERED**

10/22/01

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**Filing Date  
**May 12, 1999**Group  
**1643**U.S. Department of Commerce  
Patent and Trademark Office**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>mg</i>	<b>EM</b>	Owen et al., "Noncoding 3' sequences of the transferrin receptor gene are required for mRNA regulation by iron," <i>EMBO J.</i> , <b>1987</b> , 6(5), 1287-1293
	<b>EN</b>	Pain, "Initiation of protein synthesis in eukaryotic cells", <i>Eur. J. Biochem.</i> , <b>1996</b> , 236, 747-771
	<b>EO</b>	Phillipe et al., "Target Site of <i>Escherichia coli</i> Ribosomal Protein S15 on its Messenger RNA: Conformation and Interaction with the Protein", <i>J. Mol. Biol.</i> , <b>1990</b> , 211, 415-426
	<b>EP</b>	Pieles et al., "Matrix-assisted laser desorption ionization time-of-flight mass spectrometry: a powerful tool for the mass and sequence analysis of natural and modified oligonucleotides", <i>Nucl. Acid Res.</i> , <b>1993</b> , 21(14), 3191-3196
	<b>EQ</b>	Quigley et al., "Yeast phenylalanine transfer RNA: atomic coordinates and torsion angles", <i>Nucl. Acids Res.</i> , <b>1975</b> , 2(12), 2329-2341
	<b>ER</b>	Raghunathan et al., "Conformational Feasibility of a Hairpin with Two Purines in the Loop. 5'-d-GGTACIAGTACC-3'", <i>Biochem.</i> , <b>1991</b> , 30, 782-788
	<b>ES</b>	Recht et al., "RNA Sequence Determinants for Aminoglycoside Binding to an A-site rRNA Model Oligonucleotide", <i>J. Mol. Biol.</i> , <b>1996</b> , 262, 421-436
	<b>ET</b>	Rossomando et al., "Identification of Tyr-185 as the site of tyrosine autophosphorylation of recombinant mitogen-activated protein kinase p42 <sup>mapk</sup> ", <i>Proc. Natl. Acad. Sci USA</i> , <b>1992</b> , 89, 5779-5783
	<b>EU</b>	Shaler et al., "Analysis of Enzymatic DNA Sequencing Reactions by Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry", <i>Rapid Commun. Mass Spectrom.</i> , <b>1995</b> , 9, 942-947
	<b>EV</b>	Shen et al., "RNA structure at high resolution", <i>FASEB J.</i> , <b>1995</b> , 9, 1023-1033
	<b>EW</b>	Smith et al., "The Observation of Non-covalent Interactions in Solution by Electrospray Ionization Mass Spectrometry: Promise, Pitfalls and Prognosis", <i>J. Biol. Mass Spectrom.</i> , <b>1993</b> , 22, 493-501
<i>✓</i>	<b>EX</b>	Smith et al., "New Developments in Biochemical Mass Spectrometry: Electrospray Ionization", <i>Anal. Chem.</i> , <b>1990</b> , 62, 882-899

EXAMINER

DATE CONSIDERED 10/22/01

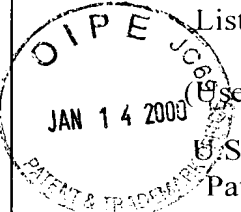
**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>MEY</i>	<b>EY</b>	Smith et al., "New mass spectrometric methods for the study of noncovalent associations of biopolymers", <i>Chem. Soc. Rev.</i> , <b>1997</b> , 26, 191-202
	<b>EZ</b>	Son, "The Structure and Regulation of Histone Genes," <i>Saenghwahak Nyusu</i> , <b>1993</b> , 13(2), 64-70
	<b>FA</b>	Standart et al., "Regulation of translation by specific protein/mRNA interactions", <i>Biochimie</i> , <b>1994</b> , 76, 867-879
	<b>FB</b>	Sternberg et al., "Display of peptides and proteins on the surface of bacteriophage $\lambda$ ", <i>Proc. Natl. Acad. Sci. USA</i> , <b>1995</b> , 92, 1609-1613
	<b>FC</b>	Sutton et al., "TIGR Assembler: A New Tool for Assembling Large Shotgun Sequencing Projects", <i>Genome Science &amp; Tech.</i> , <b>1995</b> , 1(1), 9-19
	<b>FD</b>	Thompson et al., "CLUSTAL W: improving the sensitivity of progressive multiple sequence alignment through sequence weighting, position-specific gap penalties and weight matrix choice", <i>Nucl. Acids Res.</i> , <b>1994</b> , 22(22), 4673-4680
	<b>FE</b>	Tung, "A Computational Approach to Modeling Nucleic Acid Hairpin Structures", <i>Biophysical J.</i> , <b>1997</b> , 72, 876-885
	<b>FF</b>	Udenfriend et al., "Scintillation Proximity Assay: A Sensitive and Continuous Isotopic Method for Monitoring Ligand/Receptor and Antigen/Antibody Interactions", <i>Anal. Biochem.</i> , <b>1987</b> , 161, 494-500
	<b>FG</b>	Valegard et al., "Crystal structure of an RNA bacteriophage coat protein - operator complex", <i>Nature</i> , <b>1994</b> , 371, 623-626
	<b>FH</b>	Varani et al., "The Structure of the Human Immunodeficiency Virus Type-1 TAR RNA Reveals Principles of RNA Recognition by Tat Protein", <i>J. Mol. Biol.</i> , <b>1995</b> , 253, 313-332
	<b>FI</b>	Wang et al., "Specificity of Aminoglycoside Binding to RNA Constructs Derived from the 16S rRNA Decoding Region and the HIV-RRE Activator Region", <i>Biochem.</i> , <b>1997</b> , 36, 768-779
<i>✓</i>	<b>FJ</b>	Westhof et al., "Computer-Aided Structural Biochemistry of Ribonucleic Acids", in <i>Theoretical Biochemistry and Molecular Biophysics</i> , Beveridge and Lavery (eds.), Adenine, NY, <b>1991</b> , 399-409

**EXAMINER****DATE CONSIDERED***10/22/01*

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

<i>Mez</i>	<b>FK</b>	Westhof et al., "Three-dimensional working model of M1 RNA, the catalytic RNA subunit of ribonuclease P from <i>Escherichia coli</i> ," <i>Proc. Natl. Acad. Sci.</i> , <b>1994</b> , <i>91</i> , 5133-5137
	<b>FL</b>	Wilson, "Computers Customize Combinatorial Libraries", <i>C&amp;EN</i> , April 17 <b>1998</b> , 31-37
	<b>FM</b>	Wincott et al., "Synthesis, deprotection, analysis and purification of RNA and ribozymes", <i>Nucl. Acids Res.</i> , <b>1995</b> , <i>23(14)</i> , 2677-2684
	<b>FN</b>	Winger et al., "High-Resolution Accurate Mass Measurements of Biomolecules Using a New Electrospray Ionization Ion Cyclotron Resonance Mass Spectrometer", <i>J. Am. Soc. Mass Spectrom.</i> , <b>1993</b> , <i>4(7)</i> , 566-577
	<b>FO</b>	Witherell et al., "Specific Interaction between RNA Phage Coat Proteins and RNA", <i>Prog. Nucl. Acids Res. Mol. Biol.</i> , <b>1991</b> , <i>40</i> , 185-220
	<b>FP</b>	Witkowska et al., "Mass Spectrometric Analysis of a Native Zinc-Finger Structure: The Glucocorticoid Receptor DNA Binding Domain", <i>J. Am. Chem. Soc.</i> , <b>1995</b> , <i>117(12)</i> , 3319-3324
	<b>FQ</b>	Woese et al., "Evidence for several higher order structural elements in ribosomal RNA", <i>Proc. Natl. Acad. Sci. USA</i> , <b>1989</b> , <i>86</i> , 3119-3122
	<b>FR</b>	Woese et al., "Secondary structure model for bacterial 16S ribosomal RNA: phylogenetic, enzymatic and chemical evidence", <i>Nucl. Acids Res.</i> , <b>1980</b> , <i>8(10)</i> , 2275-2293
	<b>FS</b>	Wong et al., "Specificity of aminoglycoside antibiotics for the A-site of the decoding region of ribosomal RNA", <i>Chem. Biol.</i> , <b>1998</b> , <i>5(7)</i> , 397-406
<i>↓</i>	<b>FT</b>	Zehner et al., "RNA-protein interactions within the 3' untranslated region of vimentin mRNA," <i>Nucl. Acids Res.</i> , <b>1997</b> , <i>25(16)</i> , 3362-3370
<b>EXAMINER</b>	<i>[Signature]</i>	
<b>DATE CONSIDERED</b>		<i>10/22/01</i>

<b>Form PTO-1449 Modified</b>		Docket No. <b>IBIS-0171</b>	Serial No. <b>09/310,844</b>
 List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Applicant <b>David J. Ecker et al.</b>	
		Filing Date <b>May 12, 1999</b>	Group <b>1643</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
*	<b>FU</b>	<del>Adams et al., in <i>Automated DNA Sequencing and Analysis</i>, Academic Press, San Diego, 1994</del>	
*	<b>FV</b>	<del>Brown, in <i>DNA Sequencing</i>, IRL Oxford University Press, Oxford, 1994</del>	
*	<b>FW</b>	<del>Chard, in <i>An Introduction to Radioimmunoassay and Related Techniques</i>, Elsevier Press, Amsterdam/New York, 1982</del>	
*	<b>FX</b>	<del>Cole, in <i>Electrospray Ionization Mass Spectrometry: Fundamentals, Instrumentation</i>, Wiley, New York, 1997</del>	
*	<b>FY</b>	<del>Copeland, in <i>Methods of Protein Analysis: A Practical Guide to Laboratory Protocols</i>, Chapman and Hall, New York, 1994</del>	
*	<b>FZ</b>	<del>Creighton, in <i>Protein Folding</i>, W.H. Freeman and Co., 1992</del>	
*	<b>GA</b>	<del>Czarnik, A.W. et al. (eds.), <i>Practical Guide to Combinatorial Chemistry</i>, ACS, Washington, D.C., 1997</del>	
*	<b>GB</b>	<del>Ens et al. (eds.), <i>New Methods for the Study of Biomolecular Complexes</i>, (Proceedings of the NATO Advanced Research Workshop, held in Alberta, Canada, on June 16-20, 1996, Ser. C, 1998, Vol. 510, Kluwer, Dordrecht, Neth., 1998, 1-354</del>	
*	<b>GC</b>	<del>Findlay et al., in <i>Protein Sequencing: A Practical Approach</i>, IRL Press, Oxford, 1989</del>	
*	<b>GD</b>	<del>Gutell et al., "Comparative Sequence Analysis of Experiments Performed During Evolution", In <i>Ribosomal RNA Group I Introns</i>, Green (ed.), Austin: Landes, 1996</del>	
*	<b>GE</b>	<del>Kemeny et al., in <i>ELISA and Other Solid Phase Immunoassays: Theoretical and Practical Aspects</i>, Wiley, New York, 1988</del>	
*	<b>GF</b>	<del>Loo et al., in <i>Proc. 43rd ASMS Conf. On Mass Spectrom. and Allied Topics</i>, 1995</del>	
*	<b>GG</b>	<del>Smith, in <i>Protein Sequencing Protocols</i>, Humana Press, Totowa, NY, 1997</del>	
*	<b>GH</b>	<del>Snyder, in <i>Biochemical and Biotechnological Applications of Electrospray Ionization Mass</i>, American Chemical Society, Washington, DC, 1996</del>	
<b>EXAMINER</b> <i>me</i>		<b>DATE CONSIDERED</b> 10/22/01	

\*A copy of this reference will not be forwarded to the U.S. Patent and Trademark Office since it is believed to be too voluminous and easily obtainable by the Examiner.

**Form PTO-1449 Modified**Docket No.  
**IBIS-0171**Serial No.  
**09/310,844**List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)Applicant  
**David J. Ecker et al.**U.S. Department of Commerce  
Patent and Trademark OfficeFiling Date  
**May 12, 1999**Group  
**1643****U. S. PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Name	<del>Class</del>	<del>Subclass</del>
<i>me</i>	<b>GI</b>	5,372,672	12/13/94	Seifert et al.	156	584
	<b>GJ</b>	5,472,672	12/05/95	Brennan	422	131
	<b>GK</b>	5,529,756	06/25/96	Brennan	422	131
	<b>GL</b>	5,571,902	11/05/96	Ravikumar et al.	536	22.1
<del>**</del>	<del><b>GM</b></del>	<del>09/076,206</del>	<del>05/12/98</del>	<del>Crooke et al.</del>		
<del>**</del>	<del><b>GN</b></del>	<del>09/076,214</del>	<del>05/12/98</del>	<del>Griffey et al.</del>		
<del>**</del>	<del><b>GO</b></del>	<del>09/076,404</del>	<del>05/12/98</del>	<del>Ecker et al.</del>		
<del>**</del>	<del><b>GP</b></del>	<del>09/076,405</del>	<del>05/12/98</del>	<del>Griffey et al.</del>		
<del>**</del>	<del><b>GQ</b></del>	<del>09/076,440</del>	<del>05/12/98</del>	<del>Ecker et al.</del>		
<del>**</del>	<del><b>GR</b></del>	<del>09/076,447</del>	<del>05/12/98</del>	<del>Griffey et al.</del>		

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
<i>me</i>	<b>GS</b>	WO 89/12694	12/28/89	PCT	X	

**EXAMINER** *[Signature]***DATE CONSIDERED** 10/22/01

\*\*Pursuant to 37 C.F.R. 1.98(a)(2)(iii), no copy of a U.S. patent application need be included with an Information Disclosure Statement filed under 37 C.F.R. 1.97.